

example component speed, operating protocol, etc. Accordingly, other embodiments are within the scope of the following claims.

**WHAT IS CLAIMED IS:**

1 1. A system, comprising:  
2 a backplane having a plurality of conductors;  
3 a first plurality of printed circuit boards plugged into the backplane, each one of the  
4 first printed circuit boards having a plurality of electrical contacts, each one of the electrical  
5 contacts providing an indication of an incapability of an electrical component on such one of  
6 the printed circuit boards, each one of such electrical contacts being electrically connected to  
7 a corresponding one of the plurality of conductors of the backplane;  
8 circuitry connected to the plurality of conductors for converting the operating  
9 incapability indications provided by the plurality of printed circuit boards into logic signals  
10 on the plurality of conductors;  
11 a second plurality of printed circuit boards plugged into the backplane, each one of  
12 the second plurality of printed circuit boards having a decoder responsive to the logic signals  
13 on the plurality of conductors for selecting an operating characteristic for electrical  
14 components on the second plurality of printed circuit boards, such selected operating  
15 characteristic being compatible with operating characteristics of the electrical components on  
16 the first plurality of printed circuit boards.

1 2. The system recited in claim 1 wherein the operating characteristic is operating speed and  
2 wherein the decoders select the highest speed compatible with the speed capability of the  
3 electrical components on the plurality of first printed circuit boards.

1 3. A system, comprising:  
2 a backplane having a plurality of conductors;  
3 a first plurality of printed circuit boards plugged into the backplane, each one of the  
4 first printed circuit boards having a plurality of electrical contacts, each one of the electrical  
5 contacts providing an indication signal representative of an predetermined operating  
6 incapability of an electrical component on such one of the printed circuit boards, each one of  
7 such electrical contacts being electrically connected to a corresponding one of the plurality of  
8 conductors of the backplane;

9           a second plurality of printed circuit boards plugged into the backplane, each one of  
10 the second plurality of printed circuit boards having a decoder responsive to the incapability  
11 indication signal on the plurality of conductors for selecting an operating characteristic for  
12 electrical components on the second plurality of printed circuit boards, such selected  
13 operating characteristic being compatible with operating characteristics of the electrical  
14 components on the first plurality of printed circuit boards.

1   4. The system recited in claim 3 wherein the operating characteristic is operating speed and  
2       wherein the decoders select the highest speed compatible with the speed capability of the  
3       electrical components on the plurality of first printed circuit boards.

1   5. A system, comprising:

2           a backplane having a plurality of conductors;

3           a first plurality of printed circuit boards plugged into the backplane, each one of the  
4 first printed circuit boards having a plurality of electrical contacts, each one of the electrical  
5 contacts providing an indication of an predetermined speed incapability of an electrical  
6 component on such one of the printed circuit boards, each one of such electrical contacts  
7 being electrically connected to a corresponding one of the plurality of conductors of the  
8 backplane;

9           circuitry connected to the plurality of conductors for converting the operating speed  
10 incapability indications provided by the plurality of printed circuit boards into logic signals  
11 for the plurality of printed circuit boards;

12          a second plurality of printed circuit boards plugged into the backplane, each one of  
13 the second plurality of printed circuit boards having:

14               an electrical component; and

15               a source of a plurality of clock signals, each one of the plurality of clock  
16 signals having a different rate;

17               a decoder for coupling one of the plurality of clock signals to the electrical  
18 component on such one of the second plurality of printed circuit boards selectively in  
19 accordance with the provided logic signals; and

20               wherein the decoders of the second plurality of printed circuit boards couple  
21 to the electrical components thereon the one of the plurality of clock signals having a

22 rate compatible with operating speeds of the electrical components on the first  
23 plurality of printed circuit boards.

1 6. The system recited in claim 5 wherein the circuitry provides a wired-NOR configuration.

1 7. The system recited in claim 5 wherein each one of the plurality of contacts is connected to  
2 ground potential when such contact provides an indication of operating speed  
3 incapability; otherwise such contact is open circuited.

1 8. The system recited in claim 7 wherein the circuitry provides a wired-NOR configuration.

1 9. The system recited in claim 5 wherein the decoders select as the rate a rate compatible  
2 with operating speeds of the electrical components on the first plurality of printed circuit  
3 boards the one of the plurality of clock signals having the highest rate compatible with  
4 the speed capability of the electrical components on the plurality of first printed circuit  
5 boards.

1 10. A system, comprising:

2 a backplane having a plurality of conductors;

3 a plurality of resistors, each one connected between a corresponding one of the  
4 plurality of conductors and a voltage source;

5 a first plurality of printed circuit boards plugged into the backplane, each one of the  
6 first printed circuit boards having a plurality of electrical contacts, each one of the electrical  
7 contacts being connected to a corresponding one of the plurality of conductors, each one of  
8 such contacts being connected to either ground or to an open circuit, connection to ground  
9 providing an indication of an operating speed incapability of an electrical component on such  
10 one of the first printed circuit boards;

11 wherein the contact connected to ground provides a first logic state on the one of the  
12 plurality of conductors connected thereto when such contact is connected to ground and  
13 provides a second logic state on the one of the plurality of conductors connected thereto  
14 when such contact is connected to an open circuit;

15 a second plurality of printed circuit boards plugged into the backplane, each one  
16 thereof having:  
17 an electrical component; and  
18 a source of a plurality of clock signals, each one of the plurality of clock  
19 signals having a different rate;  
20 a decoder for coupling one of the plurality of clock signals to the electrical  
21 component on such one of the second plurality of printed circuit boards selectively in  
22 accordance with the provided logic states; and  
23 wherein the decoders of the second plurality of printed circuit boards couple  
24 to the electrical components thereon the one of the plurality of clock signals having a  
25 rate compatible with operating speeds of the electrical components on the first  
26 plurality of printed circuit boards.

1 11. The system recited in claim 10 wherein the decoders selects as the rate a rate compatible  
2 with operating speeds of the electrical components on the first plurality of printed circuit  
3 boards the one of the plurality of clock signals having the highest rate compatible with the  
4 speed capability of the electrical components on the plurality of first printed circuit  
5 boards.

1 12. A system comprising:

2 a backplane having a plurality of conductors;  
3 a plurality of printed circuit boards plugged into the backplane, each one of the first  
4 printed circuit boards having a plurality of electrical contacts, each one of the electrical  
5 contacts providing an indication of an predetermined operating incapability of an electrical  
6 component on such one of the printed circuit boards, each one of such electrical contacts  
7 being electrically connected to a corresponding one of the plurality of conductors of the  
8 backplane;

9 circuitry connected to the plurality of conductors for converting the operating  
10 incapability indications provided by the plurality of printed circuit boards into logic signals  
11 for the plurality of printed circuit boards.

1 13. The system recited in claim 12 wherein the operating incapability is operating speed.

1 14. A backplane system comprising:  
2 a plurality of printed circuit boards each one having an electrical component thereon;  
3 and  
4 a backplane for producing a signal indicative of the highest rate compatible with the  
5 speed capability of the electrical components on the plurality of printed circuit boards  
6 plugged into such backplane.

1 15. A method for operating a system, comprising:  
2 providing a backplane system comprising:  
3 a plurality of printed circuit boards each one having an electrical  
4 component thereon; and  
5 a backplane having plugged therein the plurality of printed circuit  
6 boards for producing a signal indicative of an operating incompatibility of the  
7 electrical components;  
8 interrupting start-up of the system upon detection of such operating  
9 incompatibility.

1 16. The method recited in claim 15 wherein the operating incompatibility is operating speed.

1 17. The method recited in claim 15 wherein the operating incompatibility is operating  
2 protocol.

1 18. A method for operating a system, comprising:  
2 providing a backplane system comprising:  
3 a plurality of printed circuit boards each one having an electrical  
4 component thereon; and  
5 a backplane having plugged therein the plurality of printed circuit boards  
6 for producing a signal indicative of a speed compatibility of the electrical  
7 components;

8           plugging an additional printed circuit board having an electrical component thereon  
9   into the provided backplane, the electrical component on such additional printed circuit board  
10   being incompatible with the speed of the electrical components on the plurality of printed  
11   circuit boards;

12           inhibiting electrical coupling the electrical component on the additional printed circuit  
13   board from the electrical components of the plurality of printed circuit boards.

1   19. A method comprising:

2           providing a backplane having a plurality of conductors with a plurality of printed  
3   circuit boards plugged into the backplane, each one of the first printed circuit boards having a  
4   plurality of electrical contacts, each one of the electrical contacts providing an indication of  
5   an predetermined operating incapability of an electrical component on such one of the  
6   printed circuit boards, each one of such electrical contacts being electrically connected to a  
7   corresponding one of the plurality of conductors of the backplane; and

8           converting the operating incapability indications provided by the plurality of printed  
9   circuit boards into logic signals for the plurality of printed circuit boards.

1   20. The method recited in claim 19 wherein the operating incompatibility is operating speed.

1   21. The method recited in claim 19 wherein the operating incompatibility is operating  
2   protocol.